

REMARKS

This amendment, submitted in response to the Office Action dated May 21, 2003, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

As a preliminary matter, the specification has been amended as indicated above. Claims 14-18 have been added and no new matter is raised. Additionally, Applicant has amended Fig. 2 so that the step numbering in the figure corresponds with the numbering indicated in the specification.

Claims 1-18 are now all of the claims pending in the application. The Examiner rejected claims 1-13 under 35 U.S.C. § 103(a) as being unpatentable over Navaro et al. in view of Brophy et al. Applicant submits the following in traversal of the rejection.

Claim 1

The Examiner cites Navaro for disclosing a tandem free operation mode for a mobile station to mobile station.

As an initial matter, Applicant submits that Navaro teaches away from the present invention. Therefore, it is unlikely that one of ordinary skill in the art would combine Navaro with another reference to arrive at the present invention. In particular, Navaro teaches a wireless communication system employing coder/decoder means in the transmission of information between two parts of the system. Column 1, lines 4-7. In addition, Navaro provides a communication link wherein the signal quality is maintained at or around the *best signal quality*

for the given codecs available. Column 3, lines 16-19. On the other hand, in the present invention, the best signal quality codec might not always be selected since it is likely to consume the most resources and increase the load on a cell which would lead to degradation of the system performance.¹ Since Navaro always selects the best quality signal, which could lead to the degradation of system performance, one of ordinary skill in the art would not combine Navaro with another reference to achieve the presently claimed invention.

The Examiner concedes Navaro does not disclose selecting a common coding mode for each mobile station and the selection of a common coding mode takes account of the traffic load in at least one cell, and cites Brophy to cure this deficiency.

Applicant submits that one of ordinary skill in the art is not likely to combine Brophy with Navaro since Navaro teaches away from Brophy. In particular, the purpose of Navaro is to negotiate between mobile systems in order to obtain an agreeable codec. Column 8, lines 14-21. On the other hand, the purpose of Brophy is to decrease transition times and Brophy specifically states that “if negotiation of vocoder type is required, then transition time is even longer.” Column 2, lines 25-35. Therefore, since Brophy teaches away from Navaro, they would not be combined to teach the elements of the present invention.

Assuming Brophy could be combined with Navaro, Brophy teaches three speech channels, IVB_SIG, IVB_SIG_BURST and IVB_SPEECH. IVB_SIG. Each channel performs a different function, with IVB_SIG containing the vocoder type information. During vocoder

¹ The particular requirement of the claim in this regard is the requirement: “the selection of the common coding mode takes account of the traffic load in at least one cell”

bypass, the three speech channels are enabled, and a codeword for the current codec type is transmitted and searched for. The codeword is sent continuously to announce the presence of a mobile to mobile connection. If the codeword is found, and it is the same codeword, then the vocoders match and the system enters another state in order to acquire speech sync. If the vocoders do not match, the system enters a NEGOTIATE state. Column 8, lines 27-67 to column 9, lines 1-27.

It is apparent upon viewing this brief description of Brophy, that at no point is the traffic load of a cell taken into account, as specifically required in claim 1. The codeword is continuously transmitted until a match is found, regardless of the amount of traffic this could possibly produce.

In addition, Brophy does not teach or suggest the use of the features for tandem vocoding for a transcoder, as described in Navaro. Therefore, the combination is not obvious and the Examiner's reasoning is merely a result of hindsight improperly derived from only the viewing the Applicant's invention. For the above reasons, claim 1 and its dependent claims 2-13 should be deemed patentable.

Claim 2

The Examiner maintains Navaro teaches the elements of claim 2 except a common coding mode is selected on the basis of lists of coding modes supported by each mobile station and if the corresponding mobile station is in a busy cell the list of supported coding modes is shortened, and cites Brophy to cure the deficiency.

Applicant submits that the matching of codewords in Brophy does not take into account whether a cell in a mobile station is busy and nothing is indicated about the cells in the vocoder being in a busy state. In Brophy, once a codeword is indicated, a search for the matching codeword is initiated regardless of a state of a cell. Column 9, line 18 to column 10, line 23 as cited by the Examiner, describes a NEGOTIATE state which is entered if the vocoders do not match, and has nothing to do with a cell being busy.

In addition the list of supported coding modes in Brophy is not shortened. In particular, there does not even appear to be a *list* of common coding modes, but merely one mode which is searched for based upon a codeword indicated by the IVB_SIG. Column 8, lines 27-67 to column 9, lines 1-27.

Furthermore, assuming Brophy taught the elements of claim 2 as suggested by the Examiner, Navaro teaches the selection of a coding mode based on a look up table. See Table 1 and accompanying text. The combination as suggested by the Examiner would require a substantial reconstruction and redesign of Navaro, whose purpose was to obtain tandem free operation for a mobile station. The modification as suggest by the Examiner, would require a substantial change in the basic principle under which the construction was designed to operate. MPEP 2143.01. In addition, it appears that the Examiner's reasoning is merely a result of hindsight because Navaro describes its own method for tandem free operation, and is independently complete. Therefore, claim 2 should be deemed patentable.

Claim 3

The Examiner maintains Navaro teaches the elements of claim 3. Claim 3 describes selecting a coding mode on the basis of a non-shortened list of coding modes *if* no common coding mode can be selected from a shortened list. Navaro merely teaches selecting a mode based on a look up table. At no point is the coding mode selected from a non-shortened list because a common mode could not be selected from a shortened list, as described in claim 3.

In addition, it appears inconsistent that the Examiner initially cited Brophy for teaching a shortened list with respect to claim 1, indicating that a shortened list was not taught in Navaro, but now cites Navaro for teaching a shortened list in order to reject claim 3.

Moreover, there is no reason why Navaro would wait to determine a common coding mode based on a shortened list before proceeding with the selection of a common coding mode. In particular, requiring a step of shortening a list would appear to result in a delay in the selection of a coding mode in Navaro. Therefore, Examiner's reasoning is merely a result of hindsight and claim 3 should be deemed patentable.

Claim 4

The Examiner cites column 8, lines 5-32 for teaching the selection of a common coding mode based on quality optimization criterion. At most, Navaro teaches that quality and radio resources are taken into account, however, it does not mention quality *optimization* is taken into account, as described in claim 4. Column 8, lines 25-28. Therefore, claim 4 should be deemed patentable.

Claim 5

The Examiner cites Navaro for teaching the elements of claim 5. As indicated above, Navaro does not teach the shortening of a list and a codec is selected based on a look-up-table. At no point is the list of common codecs shortened to include coding modes consuming the least resources. Therefore, claim 5 should be deemed patentable.

Claim 6

The Examiner's argument with respect to claim 6 appears inconsistent. The Examiner initially states Navaro teaches the elements of claim 6, then later indicates that none of the elements of claim 6 are taught by Navaro. It appears the Examiner meant to say Navaro "discloses" instead of "fails to disclose" the particular of claim 6.

Additionally, the Examiner cites Brophy for teaching if the coding modes are not identical, the common coding mode is selected on the basis of the lists of supported coding modes for each mobile station.

In Navaro, if a common codec is not found, then tandem free operation cannot be applied. Column 8, lines 23-25. Assuming Brophy taught selecting a coding mode if the selected coding modes are not identical, Brophy would not be combined with Navaro. In particular, this would be contrary to Navaro which states that tandem free operation cannot be applied if a match is not found. Since applying Brophy is contrary to the teachings of Navaro, the combination is not obvious and the Examiner's reasoning is merely a result of hindsight. Therefore, claim 6 should be deemed patentable.

Claims 7 and 8

The Examiner maintains Brophy teaches selecting a common coding mode on the basis of lists of supported coding modes for each mobile station as a function of the same criterion. Brophy does not teach a list of supported coding modes. In Brophy, one codeword is transmitted by the IVB_SIG channel and a codec match is indicated once it is determined that the vocoders for other mobile stations match. Column 6, line 65 to column 7, lines 1-18. Therefore, Brophy does not teach selecting a common coding mode on the basis of a list and claims 7 and 8 should be deemed patentable.

Applicant has added claims 14-18 to further describe the invention. Claim 14 describes a common code is selected for a transcoder of a mobile station, claim 15 further describes the quality optimization criterion, claim 16 further describes a shortened list, claim 17 describes a busy state of a cell as described in claim 16, and claim 18 further describes a non-shortened list. No new subject matter is raised and support can be found throughout the specification. The claims should be patentable by virtue of their direct or indirect dependency to claim 1.

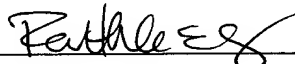
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLICATION NO. 09/749,656

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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FIG_2

